Claims

[c1] 1.A method for detecting a plurality of transcripts comprising:
synthesizing a plurality of cDNAs complementary with the transcripts by reverse transcription; wherein the synthesis of second strand cDNA is inhibited; and
hybridizing the cDNAs or nucleic acids derived from the cDNAs with a nucleic acid probe array to detect the transcripts.

[c2] 2.The method of Claim 1 wherein the synthesis of the second strand cDNA is inhibited by the presence of actinomycin.

[c3] 3.The method of Claim 2 wherein the cDNAs or nucleic acids derived from the cDNAs are labeled.

[c4] 4.The method of Claim 2 wherein the nucleic acid probe array is an oligonucleotide probe array.

[c5] 5.The method of Claim 4 wherein the nucleic acid probe array has at least 400 probes per cm^2.

[c6] 6.The method of Claim 5 wherein the nucleic acid probe array has at least 1000 probes per cm^2.

[c7] 7.The method of Claim 6 wherein the nucleic acid probe array has at least 10000 probes per cm^2.

[c8] 8.The method of Claim 4 wherein the nucleic acid probe array comprises at least least one probe against a target sequence and one probe against the reverse complementary sequence of the target sequence.

[c9] 9.The method of Claim 8 wherein the nucleic acid probe array comprises at least least 100 probes against at least 100 target sequences and at least 100 probes against at least 100 reverse complementary sequences of the target sequences.

[c10] 10.The method of Claim 9 wherein the nucleic acid probe array comprises at least 1000 probes against at least 1000 target sequences and at least 1000 probes against at least 1000 reverse complementary sequences of the target sequences.

[c11] ~~11.The method of Claim 10 wherein the nucleic acid probe array comprises at~~ least 3000 probes against at least 3000 target sequences and at least 3000 probes against at least 3000 reverse complementary sequences of the target sequences.

[c12] 12.A method for detecting transcribed regions of a genome comprising obtaining a sample comprising transcripts transcribed from the genome; synthesizing single stranded cDNAs complementary with the transcripts, wherein the synthesis of second strand cDNA is inhibited; and hybridizing the cDNAs or nucleic acids derived from the cDNAs with a nucleic acid probe array, wherein the nucleic acid probe array has probes targeting both strands of the genomic DNA in interested regions.

[c13] 13.The method of Claim 12 wherein the synthesis of the second strand cDNA is inhibited by the presence of actinomycin.

[c14] 14.The method of Claim 13 wherein the cDNAs or nucleic acids derived from the cDNAs are labeled.

[c15] 15.The method of Claim 14 wherein the nucleic acid probe array is an oligonucleotide probe array.

[c16] 16.The method of Claim 15 wherein the nucleic acid probe array has at least 400 probes per cm^2.

[c17] 17.The method of Claim 16 wherein the nucleic acid probe array has at least 1000 probes per cm^2.

[c18] 18.The method of Claim 17 wherein the nucleic acid probe array has at least 10000 probes per cm^2.

[c19] 19.The method of Claim 12 further comprising determining the template strand for at least one transcript, and wherein the probe array contains probes against both strands of the genomic DNA region where the transcript is transcribed.

[c20] 20.An assay kit comprising:
reagents necessary for a reverse transcription reaction;

an inhibitor of second strand cDNA synthesis; and

a nucleic acid probe array.

[c21] 21.The kit of Claim 20 wherein the inhibitor is actinomycin D.

[c22] 22.The kit of Claim 21 wherein the nucleic acid probe array is an oligonucleotide probe array.

[c23] 23.The kit of Claim 22 wherein the nucleic acid probe array has at least 400 probes per cm^2.

[c24] 24.The kit of Claim 23 wherein the nucleic acid probe array has at least 1000 probes per cm^2.

[c25] 25.The kit of Claim 24 wherein the nucleic acid probe array has at least 10000 probes per cm^2.

[c26] 26.The kit of Claim 25 wherein the nucleic acid probe array comprises at least one probe against a target sequence and one probe against the reverse complementary sequence of the target sequence.

[c27] 27.The kit of Claim 26 wherein the nucleic acid probe array comprises at least 100 probes against at least 100 target sequences and at least 100 probes against at least 100 reverse complementary sequences of the target sequences.

[c28] 28.The kit of Claim 27 wherein the nucleic acid probe array comprises at least 1000 probes against at least 1000 target sequences and at least 1000 probes against at least 1000 reverse complementary sequences of the target sequences.

[c29] 29.The kit of Claim 28 wherein the nucleic acid probe array comprises at least 3000 probes against at least 3000 target sequences and at least 3000 probes against at least 3000 reverse complementary sequences of the target sequences.